

**FOLLOW-UP ON THE NASSRIYA
PRISON FACILITY
NASSRIYA, IRAQ**



**SIGIR PA-08-131
APRIL 17, 2008**

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SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

April 17, 2008

MEMORANDUM FOR COMMANDING GENERAL, MULTI-NATIONAL FORCES-
IRAQ
COMMANDER, JOINT CONTRACTING COMMAND-
IRAQ/AFGHANISTAN
COMMANDER, GULF REGION DIVISION, U.S. ARMY
CORPS OF ENGINEERS
ASSISTANT SECRETARY OF STATE, BUREAU OF
INTERNATIONAL NARCOTICS AND LAW
ENFORCEMENT AFFAIRS
DIRECTOR, IRAQ TRANSITION ASSISTANCE OFFICE

SUBJECT: Report on Project Assessment of the follow-Up on the Nassriya Prison
Facility, Nassriya, Iraq (Report Number SIGIR PA-08-131)

The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded by the Iraq Relief and Reconstruction Fund to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted.

This report is being provided for your information and use. It addresses the current status of construction of the Nassriya Prison Facility, Nassriya, Iraq and whether intended objectives will be achieved.

This report does not contain any negative findings or recommendations for corrective action. As a result, management comments are not required. We did receive comments on a draft of this report from the Gulf Region Division of the United States Army Corps of Engineers which generally agreed with the facts and conclusion in the report and provided technical clarifying information for this final report.

We appreciate the courtesies extended to our staff. If you have any questions please contact Mr. Brian Flynn at brian.flynn@iraq.centcom.mil or at DSN 318-343-9244. For public or congressional queries concerning this report, please contact SIGIR Congressional and Public Affairs at publicaffairs@sigir.mil or at 703-428-1100.

A handwritten signature in black ink, reading "Stuart W. Bowen, Jr.", is positioned above the printed name.

Stuart W. Bowen, Jr.
Inspector General

Special Inspector General for Iraq Reconstruction

SIGIR PA-08-131

April 17, 2008

Follow-up on the Nassriya Prison Facility, Nassriya, Iraq

Synopsis

Introduction. The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Iraq Relief and Reconstruction Fund to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted. This is a follow-up on SIGIR assessment report PA-06-054 on the Nassriya Prison Facility issued 25 July 2006

Project Objective. The overall objective of the Nassriya Prison facility was to increase the bed count of the Iraqi Corrections Service for the Ministry of Justice through the construction of a new secure prison facility. The objective of the project was to continue the construction on the maximum/medium security prison facility located in Nassriya.

Project Assessment Objectives. We conducted this limited scope assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector. Specifically, the Special Inspector General for Iraq Reconstruction determined whether:

1. Project components were adequately designed prior to construction or installation;
2. Construction or rehabilitation met the standards of the design;
3. The contractor's quality control program and the United States government's quality assurance program were adequate;
4. Project sustainability was addressed; and
5. Project results were consistent with original objectives.

Conclusions. The assessment determined that:

1. An in-depth review of the design of the whole facility was done in SIGIR assessment report PA-06-054, issued on 25 July 2006. The design was found to be satisfactory. A review of the design of the utilities during this assessment, in light of the proposed change in function from an industrial and vocational building to inmate housing, concluded that there was adequate capacity in the water supply and wastewater treatment systems to accommodate the change.
2. The observed construction work associated with the prison met the requirements of the drawings and specifications. The United States Army Corps of Engineers, Gulf Region South project engineers took an active role in managing the project to ensure quality workmanship and compliance with the contract requirements. The project should result in a fully functional prison for the Iraqi Ministry of Justice.
3. The contractor's quality control plan was sufficiently detailed and had the structure and control to effectively guide the contractor's quality management

program. Further, the contractor's daily quality control reports contained required project and work activity information to document construction progress and identify deficiencies and defect repairs carried out.

The United States government's quality assurance program was effective in monitoring the contractor's quality control program. The Project Engineer and the Iraqi construction engineers ensured that all deficiencies cited during quality assurance inspections were corrected. The quality assurance representative also maintained daily quality assurance reports that contained project-specific information to document construction progress and highlight deficiencies. The quality assurance representative also supplemented the daily reports with detailed photographs that reinforced the narrative information provided in the reports.

4. Sustainability was addressed in the contract requirements. The Nassriya Prison project should result in a functional and modern prison. The contract required the contractor to train the appropriate individuals, provide operation and maintenance manuals, and provide warranties for a period of one year after the issuance of the Taking-Over-Certificate. The adequacy of the local contractor's performance in carrying out the construction of the prison indicate there is availability of local personnel with the appropriate level skill-set to carry out the required maintenance and operation of the facility.
5. The Nassriya Prison construction to date has been consistent with the original contract objectives. If the current quality of construction and effective project management continues, a prison facility with functional utilities, systems, and structural integrity will be realized.

Recommendations and Management Comments. This report does not contain any negative findings or recommendations for corrective action. As a result, management comments are not required. SIGIR did receive comments on a draft of this report from the Gulf Region Division of the United States Army Corps of Engineers which generally agreed with the facts and conclusions in the report and provided technical clarifying information for this final report.

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Introduction

Background

The Nassriya Prison Facility project was initiated to alleviate an already congested Iraqi prison system. Potentially, this facility may house inmates from Abu-Ghraib and Camp Bucca (currently at maximum capacity). The Nassriya Prison was designed under the United States standards for prisons, which include recreation and visitor buildings that should provide a modern, humane facility. In addition, the facility will provide approximately 1,000 jobs and an economic boost to the Nassriya region. The Nassriya Prison project¹, a facility located on 26 acres in the Thi Qar governorate, originally was conceived as a prison with the capacity to house 4,400 inmates. However, scope changes subsequently reduced the requirements for the prison to accommodate 800 inmates and provide the capability for later expansion (Figure 1).

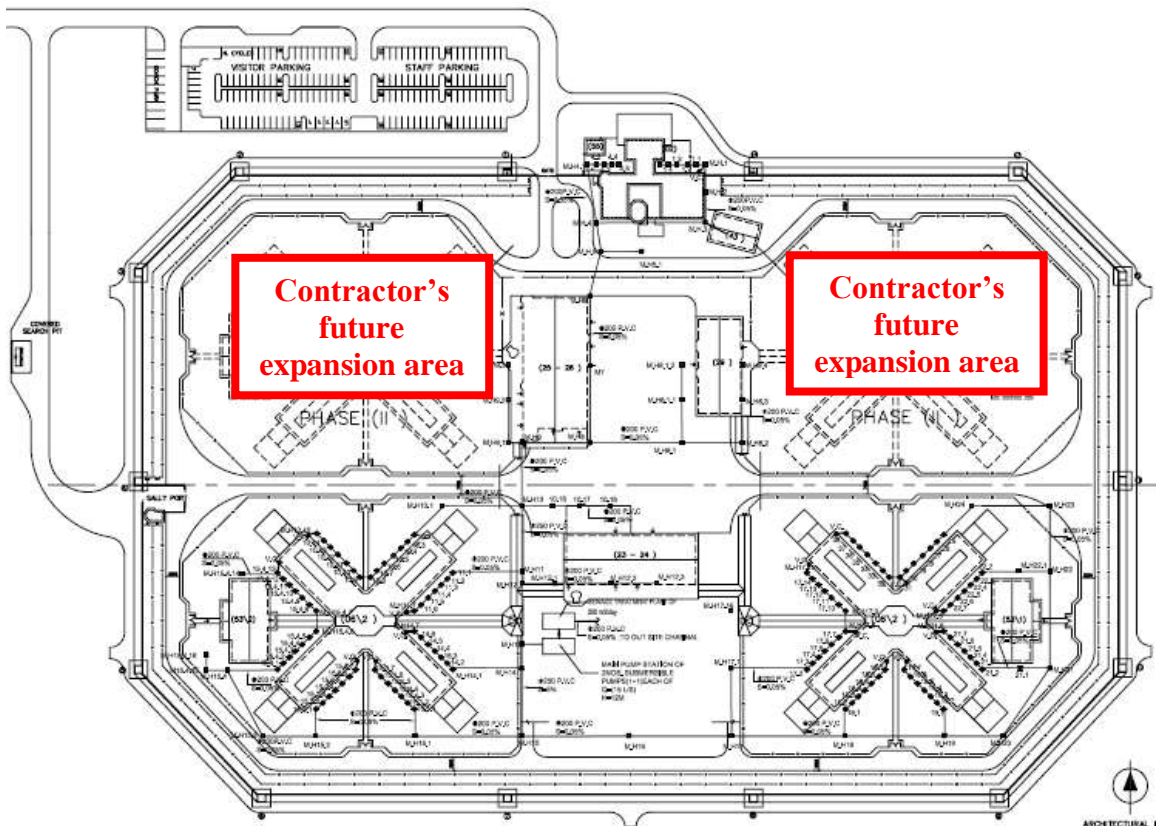


Figure 1. Parsons' revised prison layout with expansion capability (Figure courtesy of the USACE)

The Nassriya Prison project was initiated under contract W914NS-04-D-0009 with Parsons Global Services (Parsons). In July 2006, the Joint Contracting Command-Iraq/Afghanistan (JCC-I/A) initiated actions to terminate the task order due to Parsons' inability to achieve critical completion dates that resulted in unaffordable increased costs. During the timeframe between Parsons termination and the selection of the new prime contractor for the Nassriya Prison, the United States Army Corps of Engineers (USACE), Gulf Region South (GRS) issued a bridge contract to a local contractor, one of Parsons'

¹ For a more in depth review of the Nassriya Prison under the Parsons' contract refer to SIGIR PA-06-054.

subcontractors, so minor construction could continue on the prison facility. JCC-I/A subsequently awarded contract W91GXZ-06-C-0040 to a different local contractor to finish the partially completed construction of the Nassriya Prison Facility.

Contract W91GXZ-06-C-0040, also referred to as Phase I, was to complete the construction started by Parsons on two inmate housing units, administration building, maintenance building, laundry/kitchen, prayer room, roads, parking lot, and utilities (Figure 2 and Aerial Image 1).

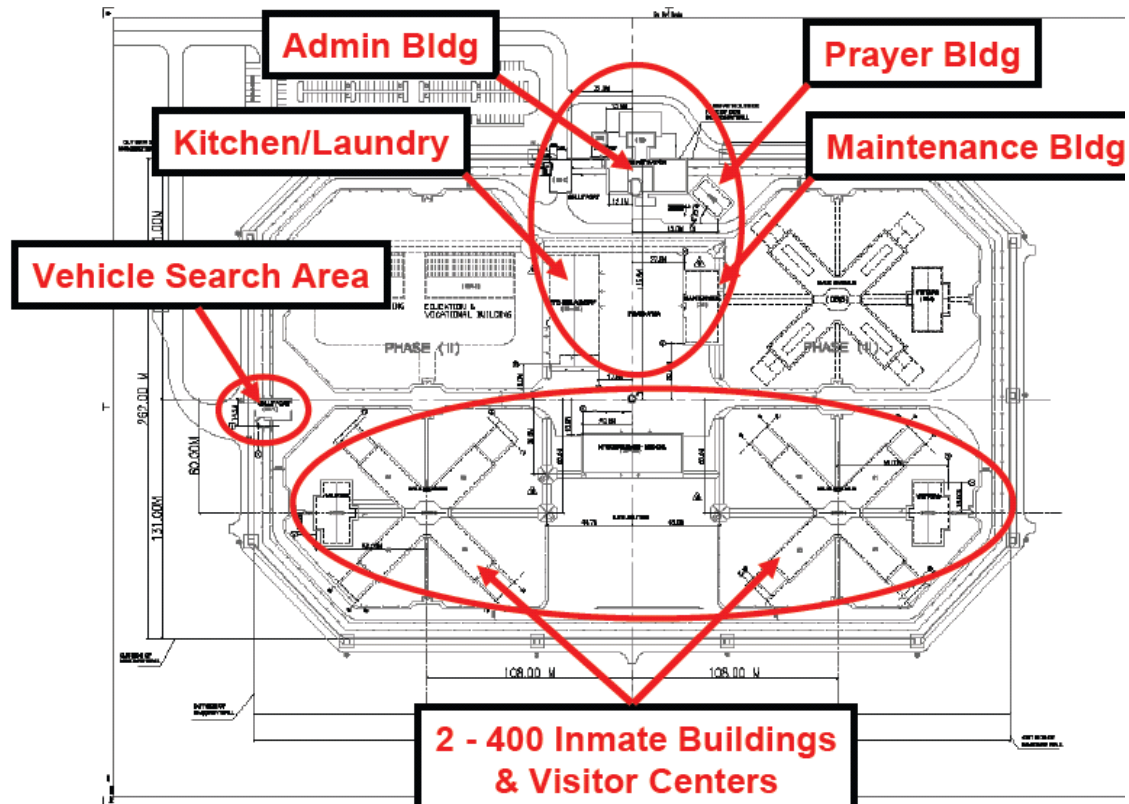


Figure 2. Current construction area (Figure courtesy of the USACE)



Aerial Image 1. Imagery taken 02DEC06 of the Nassriya Prison Facility under construction.

Objective of the Project Assessment

The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties to enable appropriate action, when warranted. We conducted this limited scope assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector. Specifically, SIGIR determined whether:

1. Project components were adequately designed prior to construction or installation;
2. Construction or rehabilitation met the standards of the design;
3. The contractor's quality control (QC) program and the U.S. government's quality assurance (QA) program were adequate;
4. Sustainability was addressed; and
5. Project results were consistent with original objectives.

Pre-Site Assessment Background

Contract, Task Order and Costs

The Nassriya Prison Facility project will be completed under contract W91GXZ-06-C-0040, dated 25 September 2006, a firm-fixed price construction contract in the amount of \$14,511,354. The contract was between the JCC-I/A and a local contractor.

There was one modification to the initial contract. Modification # P00001, issued 15 July 2007, modified the contract and increased the price by \$1,012,428 to \$15,523,772. The modification directed the contractor to supply water to the prison by running polyvinyl chloride (PVC) pipeline from the river to the prison instead of constructing the water wells on site.

Additionally, the contractor moved the plant outside the prison fence due to the inadequate space for the plant and drainage line. The contractor was to add a second lift station, which would correct a design deficiency and allow the prison sewage to properly drain out to the treatment plant. The contract performance period was extended for an additional 90 days.

Project Objective

The overall objective of the Nassriya Prison facility was to increase the bed count of the Iraqi Corrections Service for the Ministry of Justice through the construction of a new secure prison facility. The objective of the project was to continue the construction on the maximum/medium security prison facility located in Nassriya.

Description of the Facility (preconstruction)

The description of the facility (preconstruction) was based on information obtained from the USACE project file. The prison site is located in the Thi Qar governorate approximately 10 kilometers southwest of the City of Nassriya, in a sparsely populated area. The site lies several kilometers south of the Euphrates River.

Although the site is in close proximity to a small village, the adjacent land use is rural.

The Nassriya Prison project covered an area of approximately 104,000 square meters (m^2). Phase I covered approximately 14,167 m^2 and includes completing construction on two inmate housing units, an administration building, maintenance building, laundry/kitchen, prayer room, roads, parking lot, and utilities (Figure 3). Utilities were unavailable to the prison site; therefore the scope of work included the design and construction of an on-site electrical power generation plant, a water treatment plant, and a package wastewater treatment facility. Phase II will cover approximately 910 square meters. Phase II construction will consist of one inmate housing unit and one visitation center.

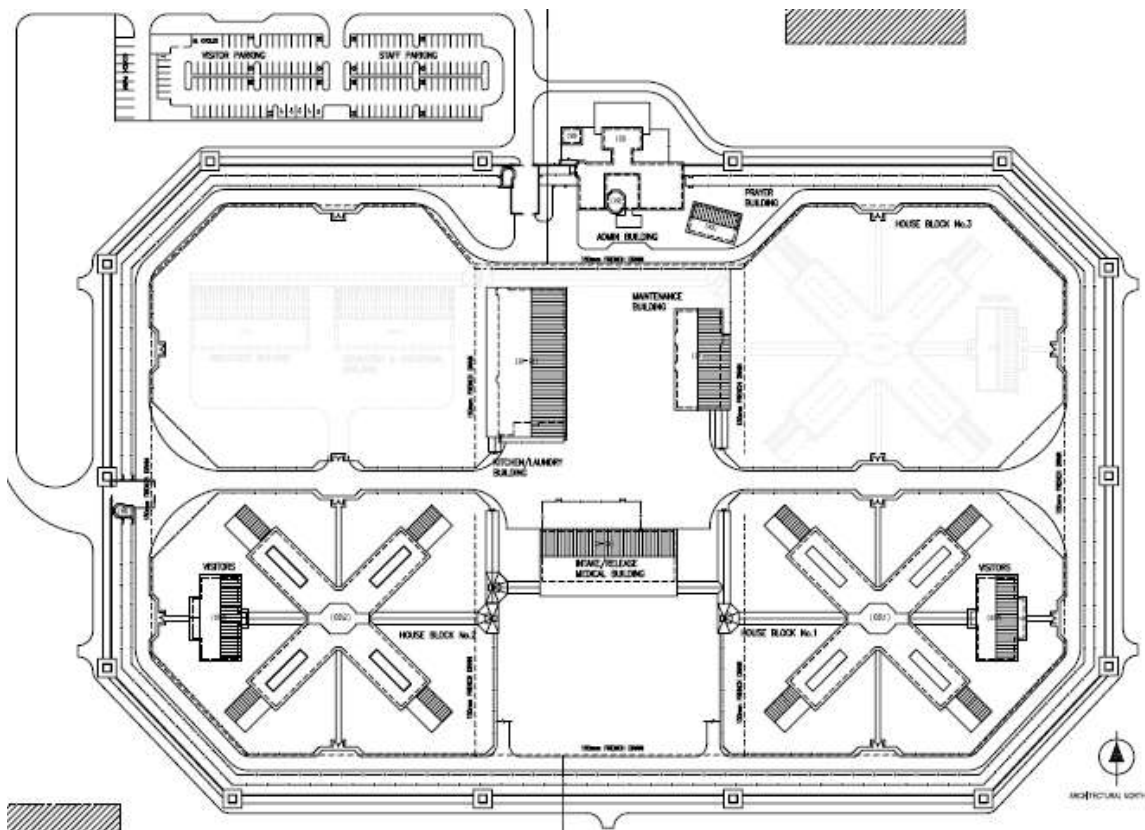


Figure 3. Completed Phase I (Figure courtesy of the USACE)

Scope of Work of the Contract

The contract's Scope of Work, dated 25 September 2006, required the contractor to complete the construction of the Nassriya Prison, which was sized to house 800 inmates. Phase I consisted of finishing the partially completed construction for the following facilities:

- administration/entry building
- maximum security unit with visitation center (2 @ 400 inmates each)
- medical/intake/release building
- maintenance building
- kitchen/laundry building
- prayer room building

- armory
- secure sally (entry) port
- external and perimeter roads and visitor/employee parking lot
- exterior perimeter wall, fences, guard towers and security lighting
- electrical generation and distribution system
- water treatment plant, storage and distribution system
- wastewater treatment plant and collection system

At the time of the assessment, there was an additional contract, also known as Phase II, which was to add another maximum security 400-bed inmate housing unit with visitation center. However, our assessment was limited to the current scope of work for Phase I, which included the above listed items.

Current Project Design and Specifications

The contract W914NS-04-D-0009 with Parsons Global Services included a requirement for the submittal and approval of all project designs and specifications. The Scope of Work required submission of a 30 percent design submittal, design development (60 percent) submittal, and construction documents (90 percent) for review and approval from the Sector Program Management Office and the USACE Resident/Project Engineer.

The USACE provided SIGIR with the prison designs submitted by the contractor. The 100 percent design included over 400 drawings used for construction of the prison, consisting of civil and site utilities, architectural, electrical, mechanical, plumbing, and structural drawings. In addition, the USACE provided the project's specifications, which were prepared by the contractor in Construction Specifications Institute format.

SIGIR's review of the design drawings and specifications were based on contract requirements and discussions with the USACE engineers. The overall design took into consideration the sequencing of work and the relationship to other work. The design also took into account local availability of materials and labor skills. Based on our review, the drawings and specifications appear to be complete and consistent with the task order's requirements, and demonstrated the contractor's understanding of the entire Scope of Work.

Since the prison facility design was completed by the original contractor (Parsons Global Services), Phase I required only the completion of the partially erected buildings around the facility, not a new set of designs.

The Nassriya Prison Phase I contract required conformance to the following codes and standards for the design and construction:

- International Building Code (IBC)
- International Plumbing Code (IPC)
- International Mechanical Code (IMC)
- International Fire Code (IFC)
- International Electromechanical Commission (IEC)
- National Fire Protection Agency (NFPA)
- Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)
- American Society for Testing and Materials (ASTM)
- American Society of Mechanical Engineers (ASME)

- American Society of Heating Refrigerating and Air conditioning Engineers, Standard 52 (ASHRAE 52)

Site Assessment

On 20 February 2008, the SIGIR assessment team performed an on-site assessment of the Nassriya Prison Facility project. We were accompanied by the USACE Project Engineer. According to the USACE engineer, the project was currently 91 percent complete. Water and electricity were connected but not energized or pressurized at the time of the assessment.

The contractor had multiple crews working at building sites throughout the prison facility.

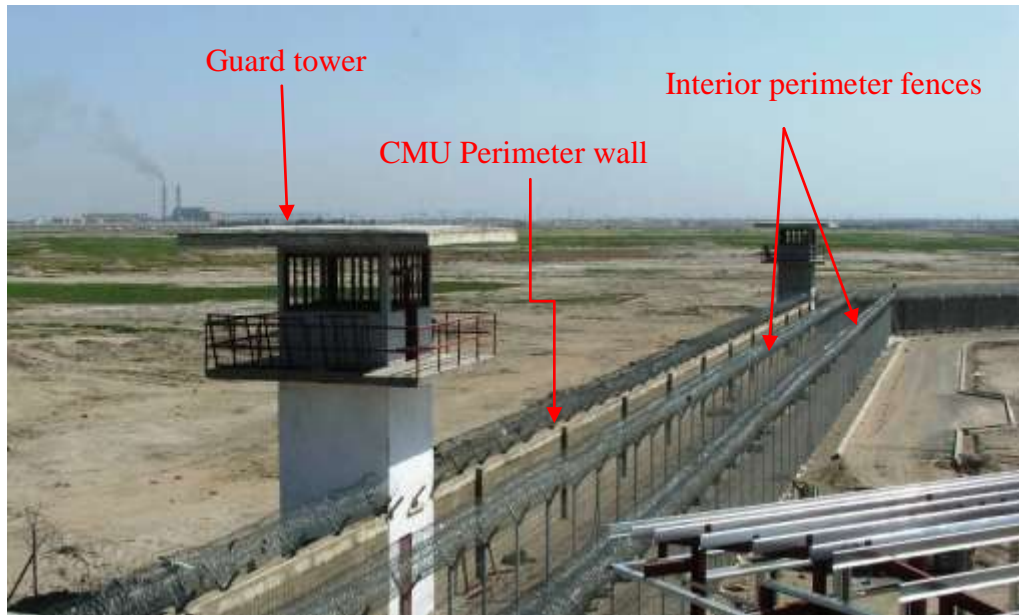
Work Completed

Perimeter Walls, Internal Fencing, Guard Towers, and Sully Gate

The wall design required a three meter (m) high wall along the perimeter of the prison, using 400 millimeter (mm) thick reinforced concrete block supported by a 1-m wide and 1.2-m deep, continuous reinforced concrete footer. Additionally, a reinforced concrete (235-mm by 400-mm) capping beam was required along the top of the wall. For added stability and support, concrete block piers were required every 10-m along the wall. Along the top of the capping beam, three coils of galvanized steel razor wire were required. Inside the perimeter wall, the design required two internal chain link fences, 3-m high, and spaced 4-m apart, with three coils of galvanized steel razor wire running along the length of each fence.

The design required 14 guard towers along the perimeter wall. The 9-m high towers, included 200-mm thick reinforced concrete walls and floors. The design also included a reinforced concrete balcony that ringed the interior guard station on the observation level of the tower.

Site Photo 1 provides an example of the guard tower, the perimeter wall and the perimeter fence construction. During our site visit, we observed that the guard towers were in place, the perimeter walls were constructed, and the coils of wire were located on top of all perimeter walls. In addition, the interior perimeter fences were in place, as designed, with the three coils of razor wire on top of the fences, and the sully gate was installed (Site Photo 2).



Site Photo 1. Guard tower, perimeter wall and interior chain link fences along prison perimeter.



Site Photo 2. Sully gate, guard tower, perimeter wall and interior chain link fences along prison perimeter.

Inmate Housing Units

The two inmate housing units were completed at the time of the site assessment. The building design required a reinforced concrete “X” shaped structure in-filled with reinforced concrete block walls. The four wings of each housing unit were designed to contain two floors of inmate cells with 26 cells upstairs and 24 cells downstairs in

each of the four wings for a total of 200 cells per building (Figure 4). Site Photo 3 shows the exterior walkway leading into the entrance of one inmate housing unit.

The four wings of each inmate housing unit were connected to a central core area located on the ground level. The central core area contained a control room and control stations for each wing, a medical office, a pharmacy, as well as rooms for a barber shop, and a commissary for prisoners. Site Photo 4 shows the central core area leading to one wing of the inmate housing unit. The quality of workmanship exhibited in the inmate housing areas was satisfactory.

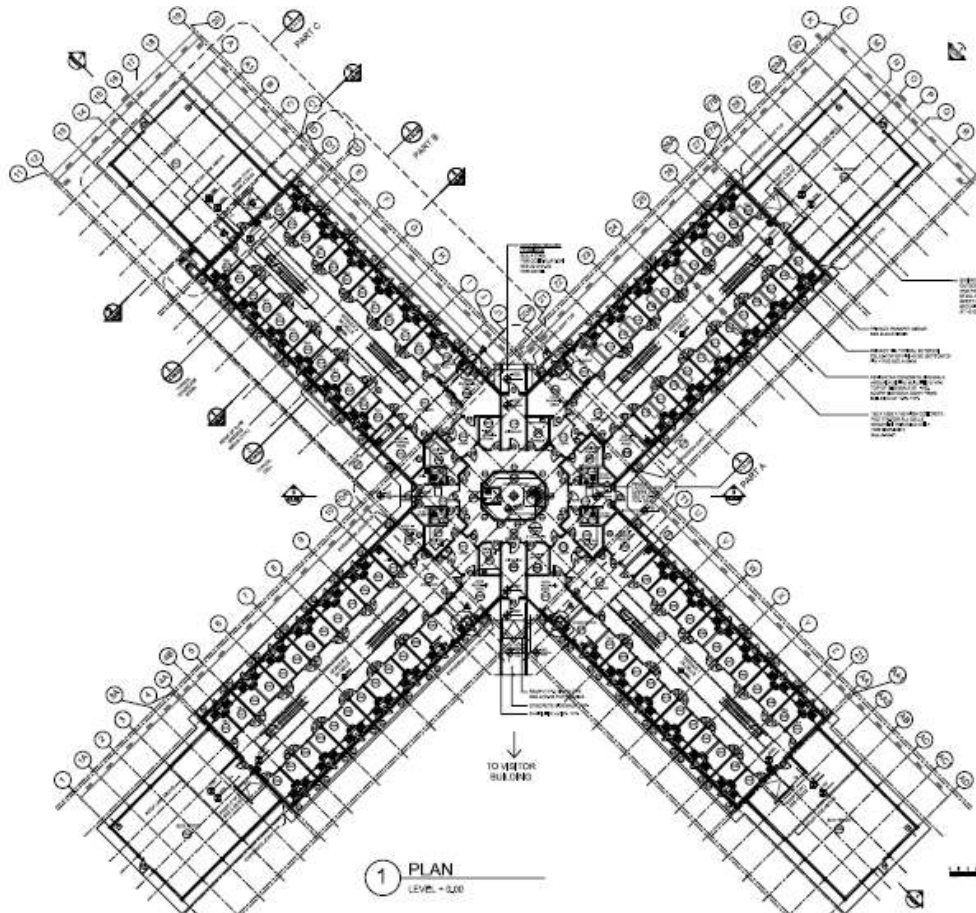


Figure 4. Inmate housing design (Figure courtesy of the USACE)



Site Photo 3. Entrance and walkway of inmate housing



Site Photo 4. Inmate housing corridor one of four (Photo courtesy of the USACE)

Each inmate cell is designed for two persons (Figure 5), with a shower (Site Photo 5), an eastern style toilet (Site Photo 6), sink (Site Photo 7), prison cell door and two beds, a wall mounted 750-mm x 1800-mm steel bed frame (Site Photo 8), and the other one consisting of a 750-mm by 1800-mm concrete pad on the cell floor (Site Photo 9). The design also required an exercise area at the end of each wing, partially covered with a pre-engineered metal roof structure. Site Photo 10 shows the sunroom without any noticeable defects.



Site Photos 5 and 6. Prison cell shower and toilet



Site Photo 7. Prison cell sink

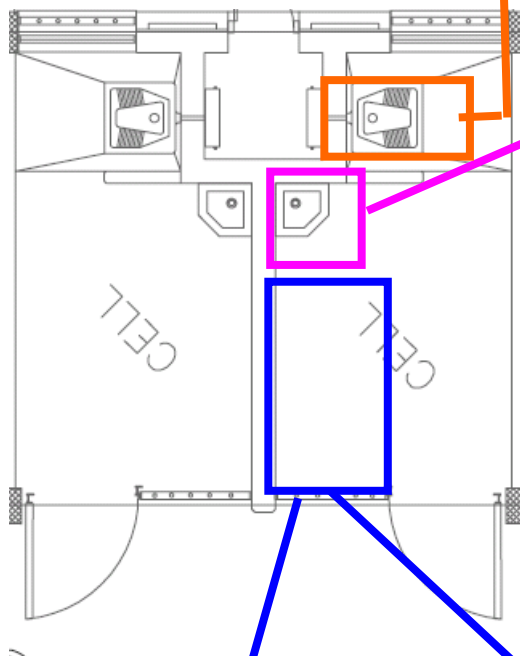


Figure 5. Cell layout (Figure courtesy of the USACE)



Site Photo 8 and 9. Upper cell bed (Photo courtesy of the USACE) and lower cell bed



Site Photo 10. Inmate sunroom

Intake/Release/Medical Building

The intake/release/medical building was another pre-engineered building. The building floor plan included rooms for the processing of new prisoners, as well as those inmates being released. In addition to rooms for processing inmates, about 60 percent of the space in this 20.7-m x 52-m facility was designed as a medical clinic that included treatment rooms, an x-ray room, a pharmacy, and a dental office. In addition, the medical facility included holding and quarantine cells for inmates.

The structural design required a foundation that consisted of isolated reinforced concrete pad footings (2-m x 2-m) supporting reinforced concrete column pedestals (400-mm x 400-mm) and reinforced concrete grade beams. The structural frame of the building included columns, roof joists, and purlins. During our site assessment, we inspected the foundation work and structural steel frame, both of which were complete (Site Photo 11). We were unable to inspect the inside of the building because the doors were locked and the contract workers were unable to locate the keys; however, the construction appeared to meet design requirements.



Site Photo 11. Intake/release/medical building

Maintenance Building

The maintenance building is another pre-engineered building with a similar foundation and structural design as the intake/release/medical building. The 38-m x 17.1-m maintenance building includes a vehicle maintenance area, workshops, and equipment and material storage rooms. Site Photo 12 shows the exterior of the maintenance building. Due to time restrictions, we were unable to inspect the interior of the building. However, the exterior work observed appeared to be consistent with the design requirements.



Site Photo 12. Maintenance building

Kitchen and Laundry Building

Site Photo 13 shows the exterior of the kitchen and laundry building. The 58-m x 26-m kitchen and laundry building structural design was similar to the other pre-engineered buildings. The architectural floor plan showed that approximately 20 percent of the building will be used for laundry services (Figure 6). The laundry services portion of the facility includes four commercial-size washers and two commercial-size dryers, work tables for folding clothes, and a sewing area. A floor drain was designed and constructed to capture overflow washer water (Site Photo 14).

The kitchen area floor plan included refrigerated and dry food storage rooms, food preparation and cooking areas, and a dishwashing room (Figure 6). The kitchen building also includes a dining area. According to GRS representatives, this dining area will be used only by prison staff members; while prisoners will only be allowed to dine in their cells.

At the time of our site visits, the kitchen and laundry building was constructed. However, furnishings such as washers, dryers, and ovens were not yet in place. The contractor turned on the electricity during our inspection of the buildings interior. The building's exterior and interior appeared to be consistent with the design requirements.



Site Photo 13. Kitchen and laundry building

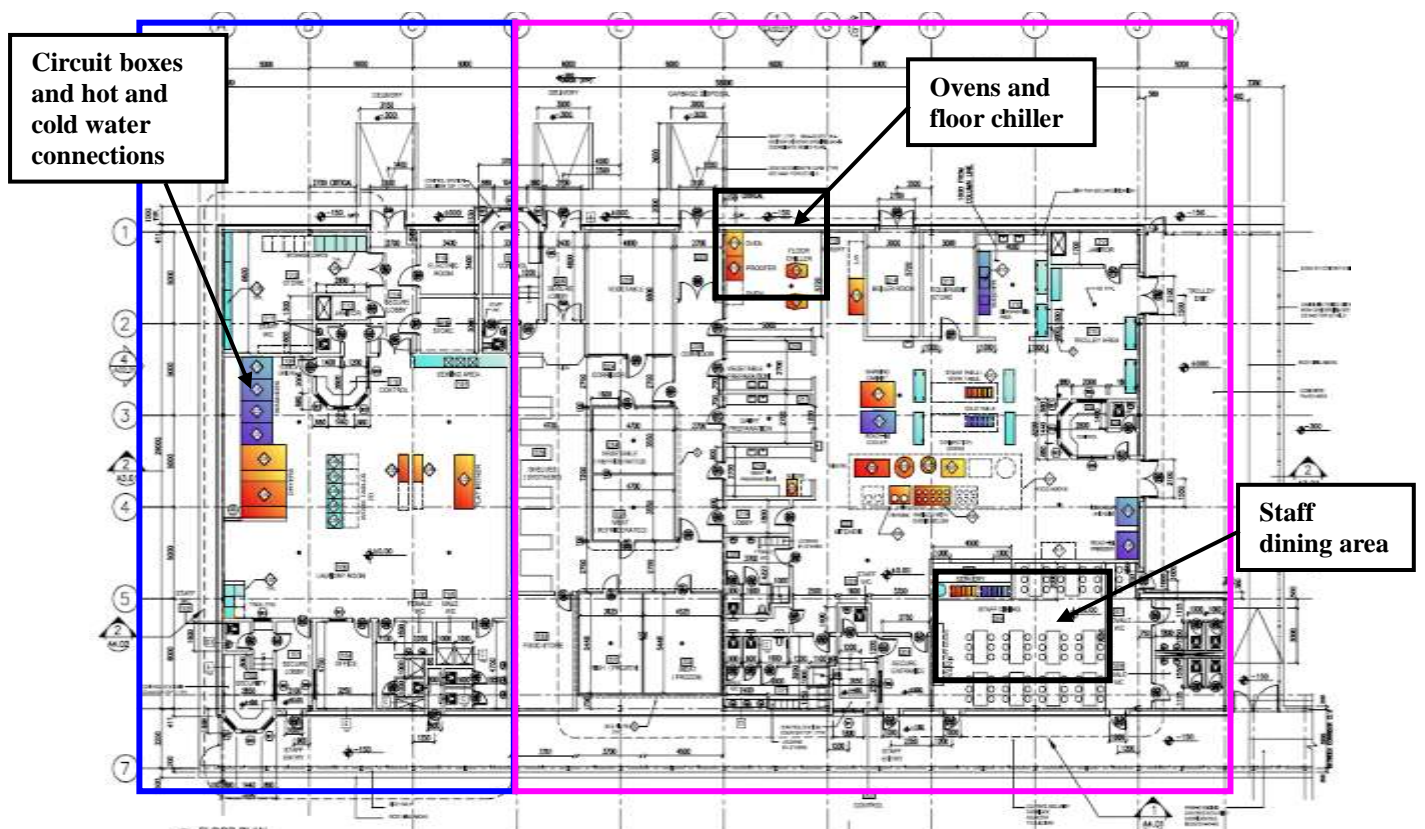
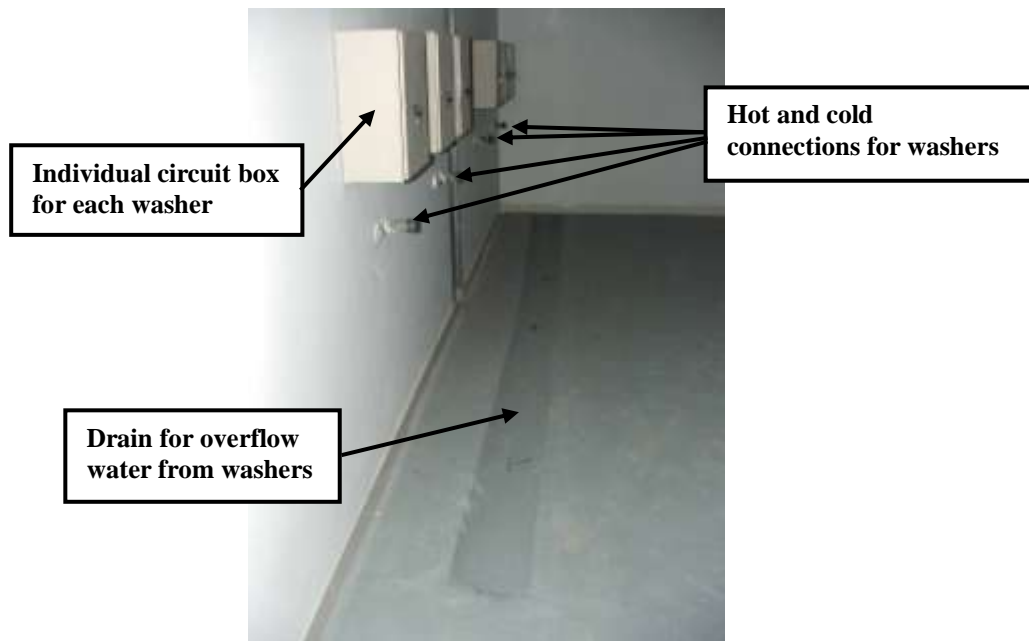


Figure 6. Laundry and kitchen layout (Figure courtesy of the USACE)



Site Photo 14. Laundry floor drain, circuit boxes, and water connections

Prayer Building

Site Photo 15 shows the exterior of the prayer building. The 18-m x 10.2-m prayer building architectural design included prayer rooms and ablution facilities (Figure 7). The building is the smallest sized pre-engineered building at the prison. In keeping with the local Iraqi tradition of not entering the prayer room with dirty feet, the contractor provided a separate restroom (ablution unit), which will allow prison staff the opportunity to wash their feet prior to entering the prayer room. At the time of our site visit, the prayer building was complete. However, in order to not disturb the prayer room, we did not enter the facility. The building's exterior appeared to be consistent with the design requirements.



Site Photo 15. Exterior frontal view of prayer building

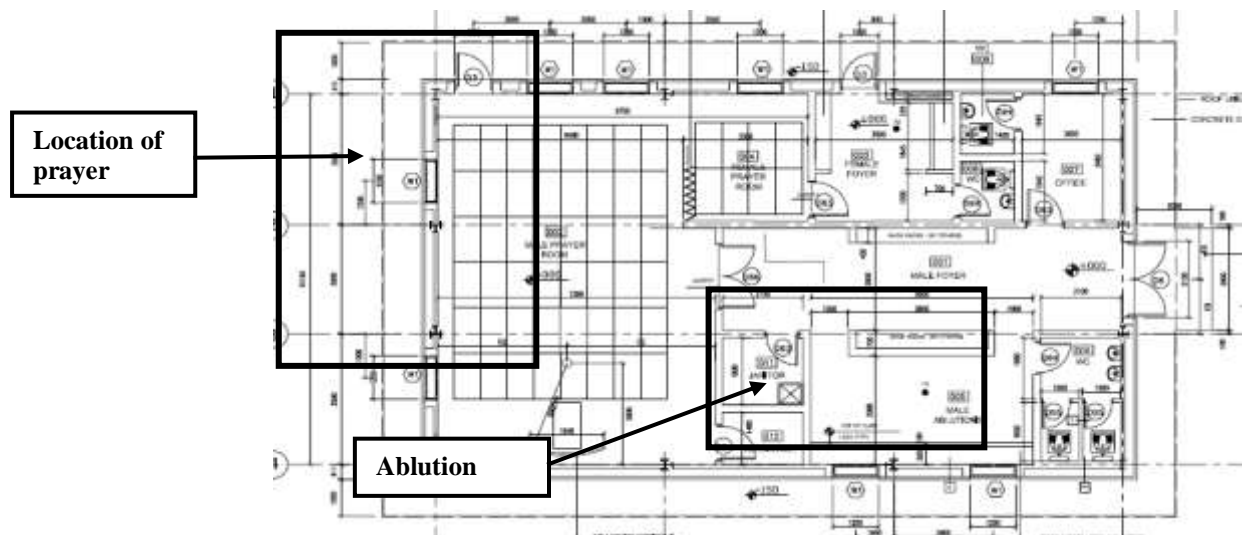


Figure 7. Prayer building layout (Figure courtesy of the USACE)

Administration Building

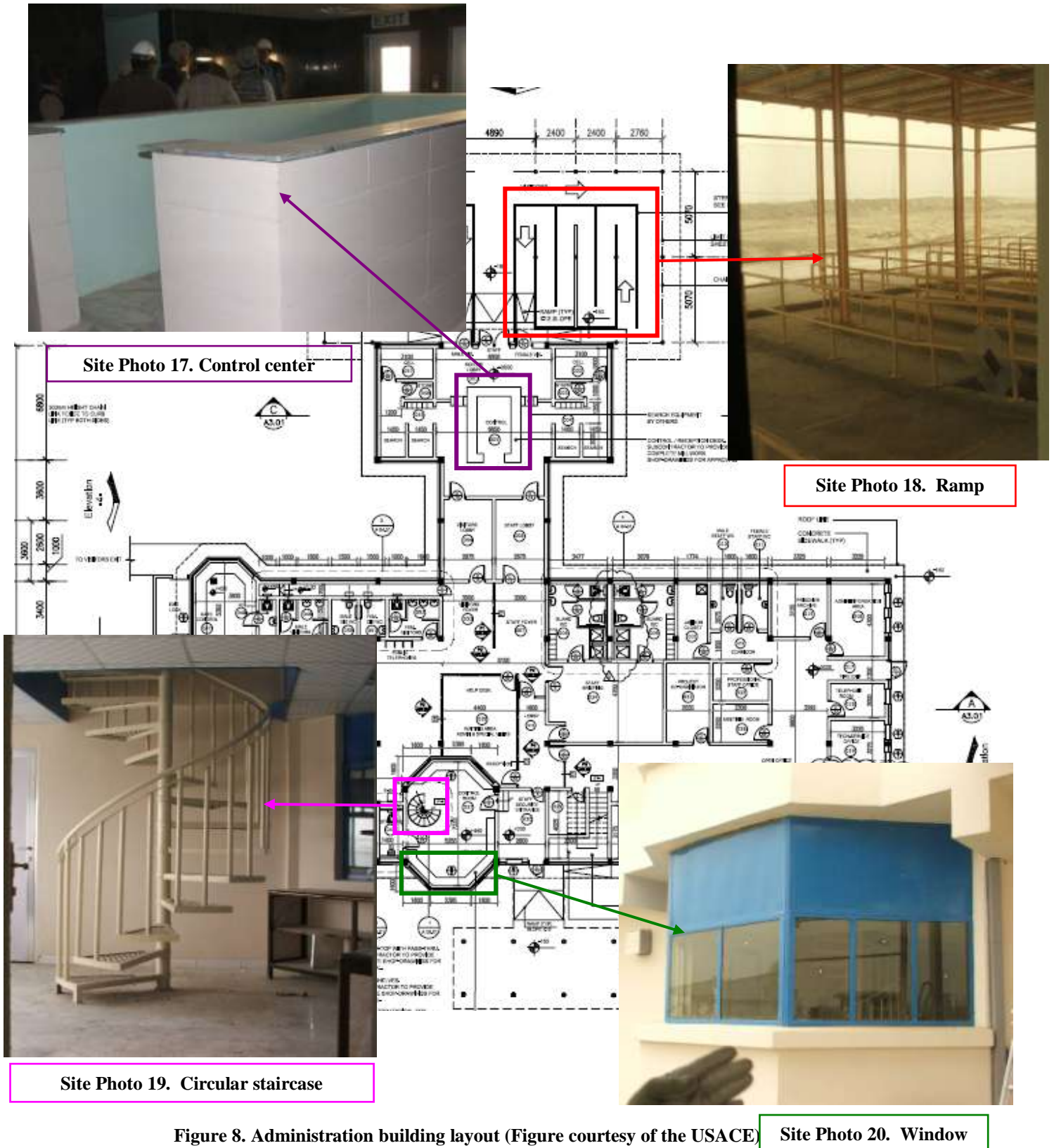
Site Photo 16 shows the exterior of the administration building and its three floors. The three story administration building will serve as the main entry point of the prison for visitors and staff. The ground floor plan included an entry control area for processing and screening visitors and staff (Figure 8 and Site Photos 17-20). The ground floor plan also required approximately 664-m² of space for prison administrative functions, as well as visitor waiting areas and bathrooms. The second story floor plan consisted of approximately 174-m² of administrative space for offices and computer support areas. The third story floor plan included only a small control room accessed from below by a spiral staircase.

The administration building structural design required a reinforced concrete frame supported by a reinforced concrete foundation consisting of a combination of isolated pad footers and continuous spread footers. The exterior walls, similar to the inmate housing units, were designed as cavity walls consisting of an inner 200-mm block wythe, horizontally and vertically reinforced, anchored to an outer 100-mm block wythe. (A wythe is a continuous vertical section of masonry one unit in thickness.) Within the cavity between the walls, the design called for 50-mm of insulation board, a finish coating of cement plaster, and paint on the interior and exterior side of the wall.

At the time of our site visit, the contractor was preparing for the final walk through by the GRS representatives. SIGIR found quality workmanship, with no noticeable cracking or problem areas during our inspection.



Site Photo 16. Exterior frontal view of the administration building



Additional Prison Facilities

The other prison facilities that we viewed were the access road, the visitor/employee parking lot (Site Photo 21), and the covered search pit (Site Photos 22 and 23). The 160-space parking lot was complete with traffic islands, curbing, and pavement base constructed. At the time of our inspection, the covered search pit had a foundation, and the structural steel cover was completed.



Site Photo 21. Prison parking lot



Site Photos 22 and 23. Covered search pit and close-up

Prison Utilities

Figure 9 shows the design layout for the Nassriya Prison utilities. The utilities are centrally located inside the prison grounds except for the sewage treatment plant (STP). The STP is located outside the prison grounds because there was inadequate space to achieve proper drainage. The STP is surrounded by a security fence. The sewage from the prison site is designed to be collected by a sewage system and treated on site before the effluent is disposed of off site. The sewage system consisted of pipes ranging from 200-mm to 110-mm and laid to gradients from 0.5 percent to 1.5 percent. There was a provision for sanitary manholes at sewer intersections, and at regular intervals along the direction of flow. Figure 10 illustrates the STP placement outside the prison grounds surrounded by its own security fence, and Figure 11 shows the close-up of the plant. The STP (Site Photo 24) consists of an administration building (Site Photo 25), pump station, pretreatment unit, aeration tank, clarifier (Site Photo 26), filter, chlorination unit, and sludge drying bed.

The provision of potable water included installation of a compact water treatment plant on site (Figure 12). The 400-m³ capacity plant is sized to support a population of 2,200. The USACE engineers have verified that the water treatment plant's production would be adequate to meet the water demand even in the event of additional prisoners with Phase III development of more inmate housing. Originally, Parsons designed the project assuming a daily water consumption of 225-liters per person. However, according to the USACE, locally conducted studies have confirmed that a daily consumption parameter of 100-liters per person was adequate.

The water treatment and storage plant receives water pumped from the nearby Euphrates River. From the river, water proceeds to one raw water storage tank, which holds 750-m³ and then to the water treatment center, shown in Site Photo 27, which contains sand filters (Site Photo 28) and a potable water booster pump (Site Photo 29). The water is then stored in one processed water tank that holds 500-m³ (Site Photo 30).

The pavement sections showed the road around the facility had granular base and sub-base as well as an asphalt concrete wearing surface. Runoff from the site would be collected in a 150 mm French drain ring that runs around the development and the 200 mm solid pipe ring laid at 0.5 percent around.

According to GRS representatives, the Nassriya Prison will run primarily off the local power grid. However, the Nassriya Prison was designed to have four stand-by generators that would supplement the supply from the local power grid (Figure 13). During our site visit, we viewed the prison generators, Site Photo 31. In addition, Site Photo 32 shows the cables connected to the observed generators. Site Photo 33 shows the four prison fuel tanks. Three fuel tanks will store 25,000 gallons each and one fuel tank will store 12,000 gallons (Figure 14).

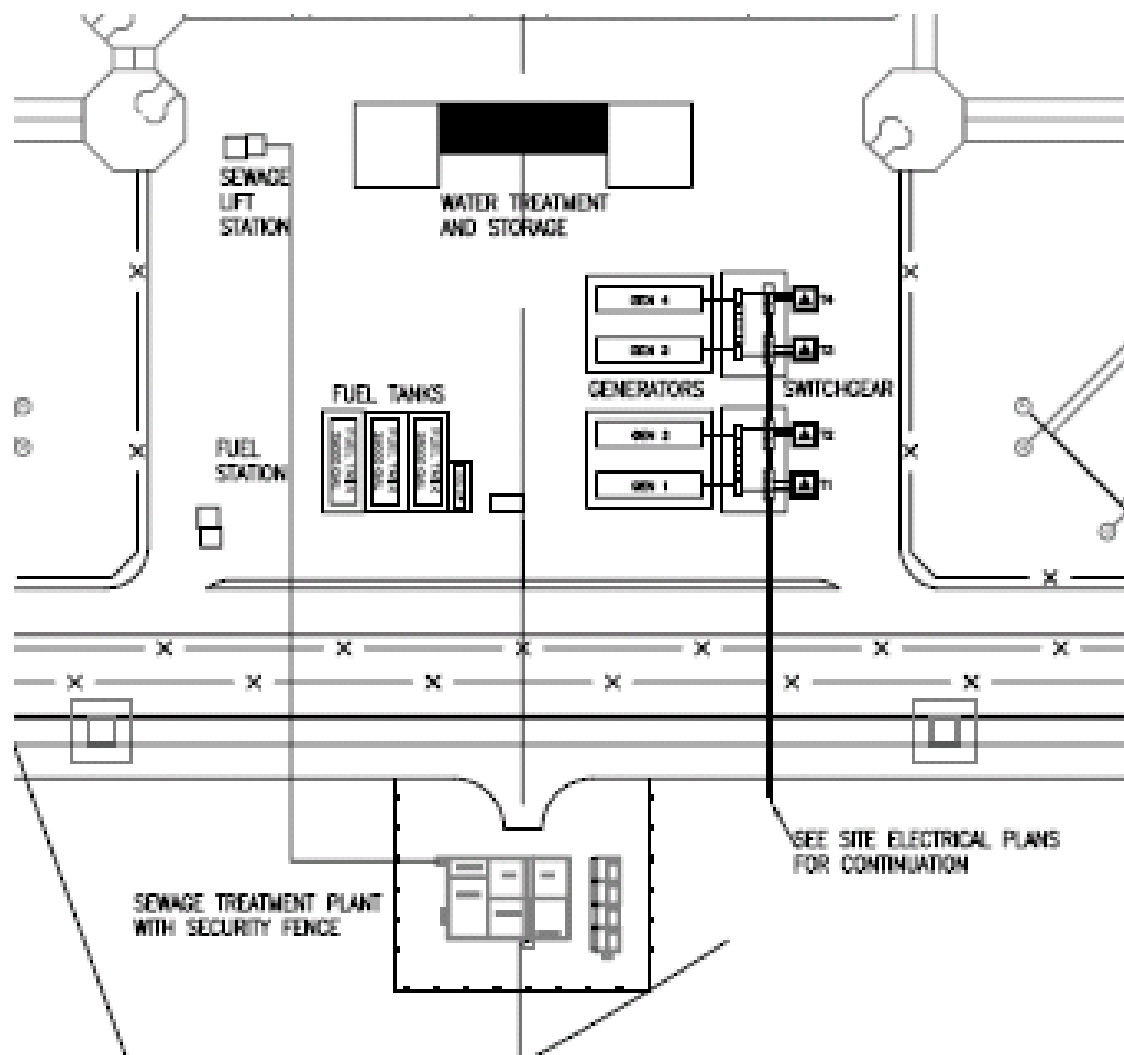
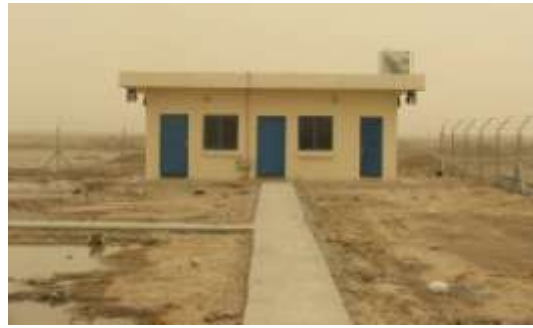
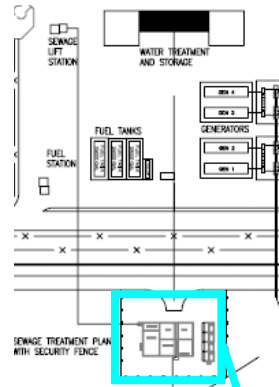
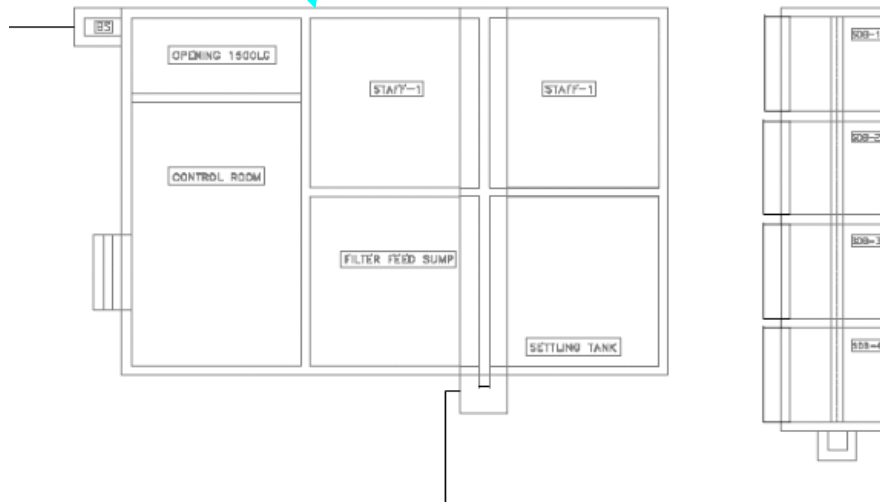


Figure 9. Prison utilities



Site Photo 25. STP Administrative building



Figures 10 and 11. Prison sewage treatment plant and STP enlargement



Site Photo 24. Sewage treatment plant



Site Photo 26. Settling tank

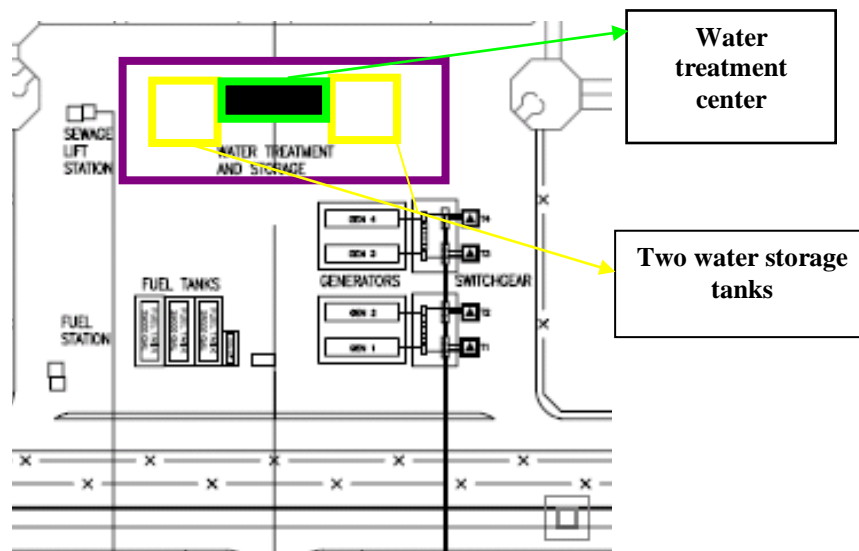


Figure 12. Prison water treatment and storage



Site Photo 27. Water treatment center



**Site Photo 28. Sand filters
(Photo courtesy of the USACE)**



**Site Photo 29. Portable water booster pump
(Photo courtesy of the USACE)**



Site Photo 30. Two water storage tanks

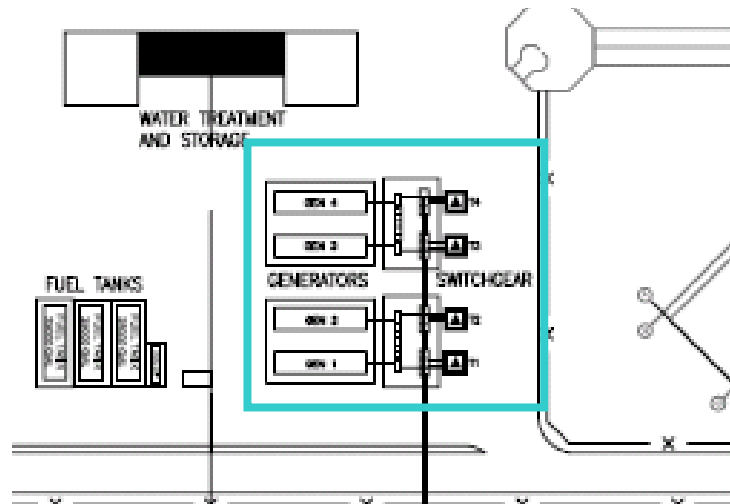


Figure 13. Prison generators and switchgears



**Site Photos 31 and 32. Substation plant transformer side and cables connected to generator
(Photos courtesy of the USACE)**



Site Photo 33. Fuel tanks

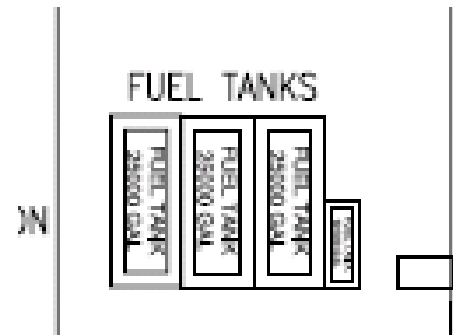


Figure 14. Prison fuel tanks

Work in Progress

Since the overall project was reported as 91 percent complete at the time of the assessment, the majority of the remaining work consists of punch list items. For example, during our site visit, we identified the following deficiencies: the inmate housing unit had a few cells with missing shower heads (Site Photo 34); a crack in the plaster of the inmate housing sunroom (Site Photo 35); exposed cables from the generator running to the switchgears that need to be covered (Site Photo 36); and electric wire going to the STP, which needs to be covered and properly housed, instead of exposed to the elements (Site Photo 37). GRS representatives noted the deficiencies and stated they would be corrected prior to the issuance of final payment to the contractor.

The contractor was performing pre-final checks on the water distribution lines, electrical distribution network, sewage treatment plant, and the prison buildings. Although the SIGIR inspection team did not observe any problems with the water distribution lines, upon our return to the International Zone, we were informed that the International Narcotics and Law Enforcement Affairs (INL) had noted some deficiencies with the Nassriya Prison. When the SIGIR inspection team discussed the issue with the INL representative, he agreed the deficiencies he was referring to were typical punch list items. We followed up with GRS representatives who stated that after our site visit, the water had been turned on to test the plumbing within the prisoners' cells. During the water testing, some leaks were discovered and were being repaired. Again, the GRS representatives stated that all deficiencies would be addressed prior to the issuance of final payment to the contractor.



Site Photo 34. Punch list item – missing shower head



Site Photo 35. Cracked corner of sun room



Site Photo 36. Exposed generator cables going to substation plant



Site Photo 37. Electric wire from prison to sewage treatment plant

Work Pending

The project was reported as 91 percent complete at the time of the assessment with minor interior and exterior work remaining on the majority of the prison buildings.

In addition, the contractor is currently constructing Phase II² for the Nassriya Prison, which will house an additional 400 inmates. Phase II will cover approximately 9,794-m², and will bring the inmate housing total to 1,200 individuals. Figure 15 shows the inmate housing unit currently under construction at the time of the site assessment. The building design required reinforced concrete laid out as an “X” shaped structure. The four wings of each housing unit were designed to contain two floors of inmate cells, with 26 cells upstairs and 24 cells downstairs in each of the four wings for a total of 200 cells per building.

Figure 16 shows Phase III where the educational wing is being replaced with another 400 male inmate building. This will bring the total population of the prison facility to 1600.

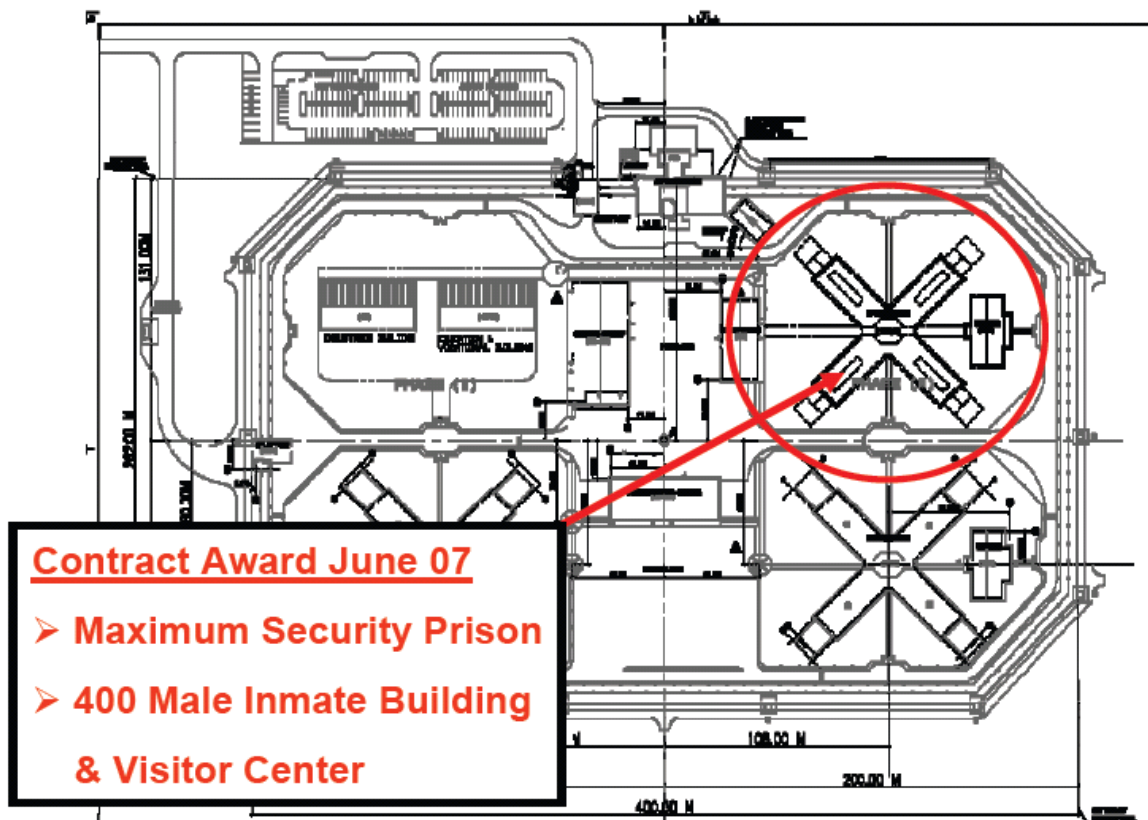


Figure 15. Phase II construction area (Figure courtesy of the USACE)

² For a more in depth review of the Nassriya Prison Phase II refer to PA-08-123.

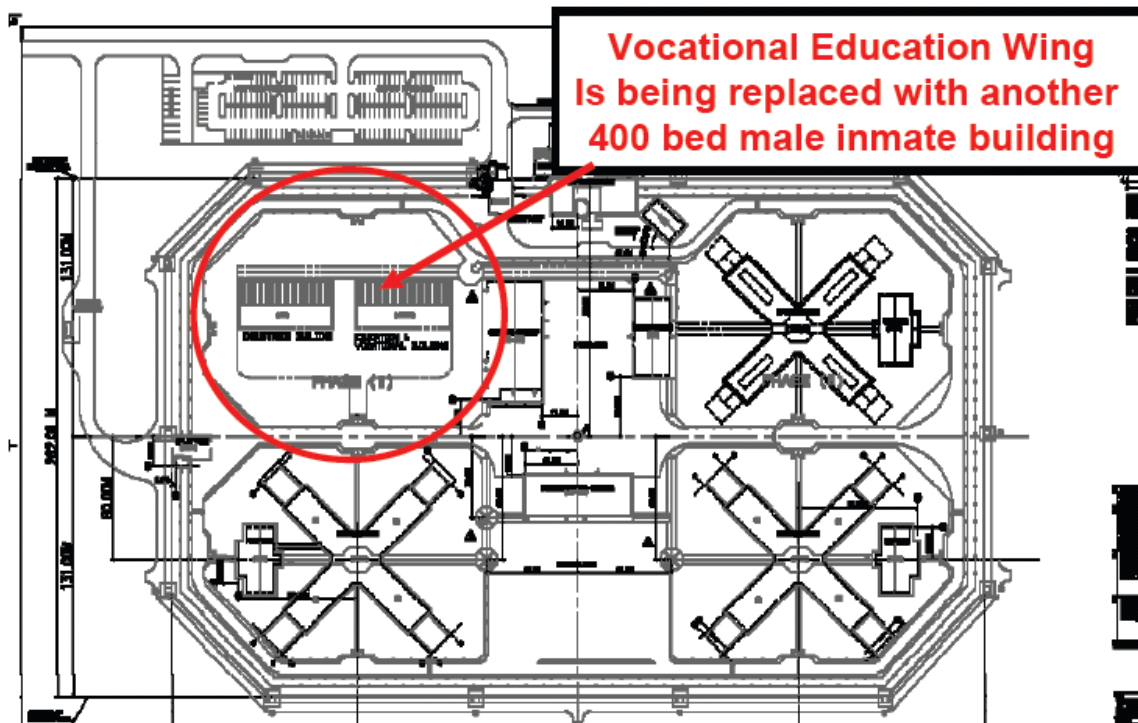


Figure 16. Phase III future construction area (Figure courtesy of the USACE)

Project Quality Management

Contractor's Quality Control Program

Department of the Army Engineering Regulation (ER) 1180-1-6, dated 30 September 1995, provides general policy and guidance for establishing quality management procedures in the execution of construction contracts. According to ER 1180-1-6, "...obtaining quality construction is a combined responsibility of the construction contractor and the government."

The contract required that the contractor provide a quality plan, which described the full extent of QA and QC measures implemented throughout all phases. The quality plan included: commentaries on objectives, responsibilities, list of proposed inspection and test plans, QA/QC, inspection of received materials and equipment, and field QC.

The current contractor used the three-phase inspection technique to monitor its production and those of its subcontractors. The three-phase inspection is a quality control protocol in which assessments are made at three different stages during the process of constructing a definable part of a project (e.g. piping). The three stages are preparatory phase, initial phase, and follow-up phase. For the preparatory phase, the quality control representative (QCR) organized a meeting to review applicable specifications, drawings, submittals, and testing before the start of a definable construction activity. The initial phase established the monitoring criteria, through completion of a representative sample, to be used for the construction of the definable area. The follow-up inspections involved monitoring to ensure the metrics established in the initial phase were followed and achieved. Inspection results were documented in the daily QC reports.

The contract required the contractor to maintain a comprehensive daily log, including: a description of the day's activities of work performed, workers present, major equipment present, weather conditions, and significant events or concerns. In addition, the daily logs include the contractor's project superintendent's assessment of the project progress and documentation of the QA/QC inspections and corrective actions.

We reviewed all the daily QC reports for the Nassriya Prison Facility project. The daily QC reports generally documented the contractor's daily activities as well as the activities of its subcontractors and any critical issues. The daily reports documented the labor strength and production of the various trades for the day. In addition, the QC reports had records of tests, inspections, re-work or deficiencies identified throughout the day. There was detailed documentation of site activities to facilitate further review of progress and quality by senior management for compliance with requirements of the QC plan. Also, there were photographs documenting various stages of construction. Photographs showed activities such as installation of windows and air ducts, painting of walls, and laying foundation reinforcements.

In addition, the contractor provided test reports to the USACE for the soil density foundations, road sub-bases, concrete compressive strength test, and rebar. Testing equipment was also checked to ensure that they were correctly calibrated. After reviewing the QC plan, QC reports, and submittals; SIGIR found the contractor's QC program to be adequate.

Government Quality Assurance

The USACE ER 1110-1-12 and PCO Standard Operating Procedure CN-100 specified requirements for a government QA program. Similar to the QC program, a crucial oversight technique is presence at the construction site. The USACE GRS, which was responsible for administration of the Nassriya Prison project, had dedicated personnel on site during significant construction activities.

The USACE trained the Iraqi construction engineers, who were on site during construction events, to monitor field activities and complete daily QA reports, which were forwarded to the USACE engineer for review. The reports showed the overall percentage of work completed, number of workers on site, and the activity description for the day. Also, the QA reports showed the equipment on site, safety concerns, weather, and photographs of the activities taking place throughout the day. The report noted any material that was delivered to the site, and QC issues were discussed by the contractor and the project management teams in the weekly job meeting. The QA team tracked deficiencies on the QA reports.

In addition, the QA program maintained a submittal log. A review of the submittal log indicated that the QA team reviewed and approved submittals for definable items in architectural, structural, electrical, mechanical, and civil works. Examples of submittal items reviewed included product information for asphalt mix design, distribution boards, and shop drawings for water distribution. The review was rigorous so as to maintain the integrity of the construction. Submittals for some items such as ceramic tiles, electrical substation, layout, and fuel tank had to be revised and re-submitted before final approval.

The USACE QA program was adequate. The government QA program was effective in monitoring the contractor's QC program for the Nassriya Prison project.

Project Sustainability

Commissioning, Training, & Operations and Maintenance

The contract stated that the contractor shall prepare a commissioning and training plan. In addition, the contract stated that the contractor shall submit the plan for review and approval by the USACE Contracting Officer's Representative. Where training is required, the contractor shall provide training for up to ten personnel. The contract stated that the commissioning and training shall be conducted prior to final acceptance of the project and final payment. Also, the contractor shall furnish three sets of Operations and Maintenance (O&M) manuals on each system to the contracting officer. The Taking-Over-Certificate will be issued to the contractor after the following tasks have been completed: final inspection of completed facility by designated representative and the USACE Resident Engineer; completion and resolution of all punch list items; and delivery and acceptance of final as-built drawings and O&M manuals.

The contractor provided a commissioning plan to the USACE. We reviewed the commissioning plan and found it to be adequate. The contractor has not provided training or the O&M manuals, as work is currently on-going at the Nassriya Prison site.

Warranties

The contract stated that the contractor warrants that the work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the contractor or any subcontractor or any supplier at any tier. The warranty shall continue for a period of one year from the date of final acceptance of the work. If the government takes possession of any part of the work before final acceptance, the warranty shall continue for a period of one year from the date the government takes possession. The contractor shall remedy at the contractor's expense any failure to conform or any defect.

Conclusions

Based upon the results of our site visit, we reached the following conclusions for assessment objectives 1, 2, 3, 4, and 5. Appendix A provides details pertaining to Scope and Methodology.

1. Determine whether project components were adequately designed prior to construction or installation.

An in-depth review of the design of the whole facility was done in SIGIR assessment report PA-06-054, issued on 25 July 2006. The design was found to be satisfactory. A review of the design of the utilities during this assessment, in light of the proposed change in function from an industrial and vocational building to inmate housing, concluded that there was adequate capacity in the water supply and wastewater treatment systems to accommodate the change.

2. Determine whether construction met the standards of the design.

The observed construction work associated with the prison met the requirements of the drawings and specifications. The United States Army Corps of Engineers, Gulf Region South project engineers took an active role in managing the project to ensure quality workmanship and compliance with the contract requirements. The project should result in a fully functional prison for the Iraqi Ministry of Justice.

3. Determine whether the contractor's quality control program and the U.S. government's quality assurance program were adequate.

The contractor's quality control plan was sufficiently detailed and had the structure and control to effectively guide the contractor's quality management program. Further, the contractor's daily quality control reports contained required project and work activity information to document construction progress and identify deficiencies and defect repairs carried out.

The United States government's quality assurance program was effective in monitoring the contractor's quality control program. The Project Engineer and the Iraqi construction engineers ensured that all deficiencies cited during quality assurance inspections were corrected. The quality assurance representative also maintained daily quality assurance reports that contained project-specific information to document construction progress and highlight deficiencies. The quality assurance representative also supplemented the daily reports with detailed photographs that reinforced the narrative information provided in the reports.

4. Determine if project sustainability was addressed.

Sustainability was addressed in the contract requirements. The Nassriya Prison project should result in a functional and modern prison. The contract required the contractor to train the appropriate individuals, provide operation and maintenance manuals, and provide warranties for a period of one year after the issuance of the Taking-Over-Certificate. The adequacy of the local contractor's performance in carrying out the construction of the prison indicate there is availability of local personnel with the appropriate level skill-set to carry out the required maintenance and operation of the facility.

5. Determine whether project results were consistent with original objectives.

The Nassriya Prison construction to date has been consistent with the original contract objectives. If the current quality of construction and effective project management continues, a prison facility with functional utilities, systems, and structural integrity will be realized.

Recommendations and Management Comments

This report does not contain any negative findings or recommendations for corrective action. As a result, management comments are not required. We did receive comments on a draft of this report from the Gulf Region Division of the United States Army Corps of Engineers which generally agreed with the facts and conclusions in the report and provided technical clarifying information for this final report. See Appendix D for the complete text of the Gulf Region Division's comments.

Appendix A. Scope and Methodology

This project assessment was performed from February through March 2008 in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included a professional engineer/inspector and an auditor/inspector.

In performing this Project Assessment, we:

- Reviewed contract documentation to include the following: contract, contract modifications, and scope of work;
- Reviewed the design package (drawings and specifications), quality control plan, contractor's quality control reports, U.S. Army Corps of Engineers quality assurance reports, and construction progress photos;
- Interviewed the U.S. Army Corps of Engineers, Gulf Region South officer in charge/area engineer and the International Narcotics and Law Enforcement Affairs;
- Conducted an on-site assessment of the Nassriya Prison Expansion - Phase I on 20 February 2008 and documented the results at the Nassriya Prison Expansion – Phase I in Nassriya, Iraq; and
- Reviewed PA-06-054 Nassriya Prison report issued previously by SIGIR.

Appendix B. Acronyms

GRS	Gulf Region South
INL	International Narcotics and Law Enforcement Affairs
JCC-I/A	Joint Contracting Command-Iraq/Afghanistan
km	Kilometer
O&M	Operations and Maintenance
m	Meter
m ²	Square Meter
m ³	Cubic Meter
mm	Millimeter
QA	Quality Assurance
QAR	Quality Assurance Representative
QC	Quality Control
QCR	Quality Control Representative
SIGIR	Special Inspector General for Iraq Reconstruction
STP	Sewage Treatment Plant
USACE	United States Army Corps of Engineers

Appendix C. Report Distribution

Department of State

Secretary of State

Senior Advisor to the Secretary and Coordinator for Iraq

Director of U.S. Foreign Assistance/Administrator, U.S. Agency for
International Development

Director, Office of Iraq Reconstruction

Assistant Secretary for Resource Management/Chief Financial Officer,
Bureau of Resource Management

U.S. Ambassador to Iraq

Director, Iraq Transition Assistance Office

Mission Director-Iraq, U.S. Agency for International Development

Inspector General, Department of State

Department of Defense

Secretary of Defense

Deputy Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Deputy Assistant Secretary of Defense-Middle East, Office of Policy/International
Security Affairs

Inspector General, Department of Defense

Director, Defense Contract Audit Agency

Director, Defense Finance and Accounting Service

Director, Defense Contract Management Agency

Department of the Army

Assistant Secretary of the Army for Acquisition, Logistics, and Technology

Principal Deputy to the Assistant Secretary of the Army for Acquisition,
Logistics, and Technology

Deputy Assistant Secretary of the Army (Policy and Procurement)

Commanding General, Joint Contracting Command-Iraq/Afghanistan

Assistant Secretary of the Army for Financial Management and Comptroller

Chief of Engineers and Commander, U.S. Army Corps of Engineers

Commanding General, Gulf Region Division

Chief Financial Officer, U.S. Army Corps of Engineers

Auditor General of the Army

U.S. Central Command

Commanding General, Multi-National Force-Iraq

Commanding General, Multi-National Corps-Iraq

Commanding General, Multi-National Security Transition Command-Iraq

Commander, Joint Area Support Group-Central

Other Federal Government Organizations

Director, Office of Management and Budget
Comptroller General of the United States
Inspector General, Department of the Treasury
Inspector General, Department of Commerce
Inspector General, Department of Health and Human Services
Inspector General, U.S. Agency for International Development
President, Overseas Private Investment Corporation
President, U.S. Institute for Peace

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

U.S. Senate

Senate Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on State, Foreign Operations, and Related Programs
Senate Committee on Armed Services
Senate Committee on Foreign Relations
 Subcommittee on International Development and Foreign Assistance, Economic Affairs, and International Environmental Protection
 Subcommittee on International Operations and Organizations, Democracy and Human Rights
 Subcommittee on Near Eastern and South and Central Asian Affairs
Senate Committee on Homeland Security and Governmental Affairs
 Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security
 Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
Permanent Subcommittee on Investigations

U.S. House of Representatives

House Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on State, Foreign Operations, and Related Programs
House Committee on Armed Services
 Subcommittee on Oversight and Investigations
House Committee on Oversight and Government Reform
 Subcommittee on Government Management, Organization, and Procurement
 Subcommittee on National Security and Foreign Affairs
House Committee on Foreign Affairs
 Subcommittee on International Organizations, Human Rights, and Oversight
 Subcommittee on the Middle East and South Asia

Appendix D. Gulf Region Division Comments



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
GULF REGION DIVISION
BAGHDAD, IRAQ
APO AE 09348

CE/GRD-CG

15 April 2008

MEMORANDUM FOR Special Inspector General for Iraq Reconstruction, US Embassy Annex,
M-202, Old Presidential Palace, APO AE 09316

SUBJECT: Draft SIGIR Project Assessment Report – Follow-up on the Nassriya Prison Facility,
Nassriya, Iraq, SIGIR Report Number PA- 08-131

1. This memorandum provides the U.S. Army Corps of Engineers, Gulf Region Division response to the subject draft audit report.
2. The Gulf Region Division reviewed the subject draft report and generally agrees with the facts and conclusions contained in the draft report. We have provided additional technical comments for clarification in the enclosure.
3. Thank you for the opportunity to review the draft report and provide our written comments for incorporation in the final report.
4. If you have any questions, please contact Mr. Robert Donner at (540) 665-5022 or via email robert.donner@army.mil.

Encl


GARY D. PLEASE
COL, EN
Chief of Staff

COMMAND REPLY
to
**SIGIR Draft Project Assessment Report – Follow-up on the Nassriya Prison Facility,
Nassriya, Iraq**
SIGIR Report Number PA- 08-131
(Project PA-08-131)

Overall Comment. The Gulf Region Division (GRD) reviewed the report and generally agrees with the facts and figures as presented in the report. GRD provides the following technical comments for clarification.

1. **Draft Report, Page 3, under Pre-Site Assessment Background, Contract, Task Order and Costs, third paragraph, first sentence.** Additionally, the contractor moved the plant outside the prison fence due to the inadequate space for the sewage treatment plant and drainage line.

Command Comment. Change sentence to read, "Additionally, the contractor moved the plant outside the prison fence due to the inadequate space for the plant and drainage line."

2. **Draft Report, Page 6, first paragraph, last sentence.** Water and electricity had not been connected to the inmate housing units at the time of the assessment.

Command Comment. Change the sentence to read, "Water and electricity were connected but not energized or pressurized at the time of the assessment."

3. **Draft Report, Page 7 – last sentence and top of Page 8.** The four wings of each housing unit were designed to contain two floors of inmate cells with 24 cells per floor in each of the four wings for a total of 192 cells per building (Figure 4).

Command Comment. Change the sentence to read, ""The four wings of each housing unit were designed to contain two floors of inmate cells with 26 cells upstairs and 24 cells downstairs in each of the four wings for a total of 200 cells per building (Figure 4)."

4. **Draft Report, Page 10.** Boxes and arrows related to pictures.

Command Comment. The orange box and arrow and one of the blue arrows appear out of place and may point to the wrong pictures.

Enclosure

COMMAND REPLY
to
**SIGIR Draft Project Assessment Report – Follow-up on the Nassriya Prison Facility,
Nassriya, Iraq**
SIGIR Report Number PA- 08-131
(Project PA-08-131)

5. **Draft Report, Page 18, first paragraph, last sentence and photographs on page 20.** The STP (Site Photo 25) consists of an administration building (Site Photo 24), pump station, pretreatment unit, aeration tank, clarifier (Site Photo 26), filter, chlorination unit, and sludge drying bed.

Command Comment. Change the sentence to read, "The STP (Site Photo 24) consists of an administration building (Site Photo 25), pump station, pretreatment unit, aeration tank, clarifier (Site Photo 26), filter, chlorination unit, and sludge drying bed." In addition, the photograph numbers need corresponding changes.

6. **Draft Report, Page 25, second paragraph, last sentence.** The four wings of each housing unit were designed to contain two floors of inmate cells, with twenty-four cells per floor in each of the four wings for a total of 192 cells per building.

Command Comment. Change the sentence to read, "The four wings of each housing unit were designed to contain two floors of inmate cells with 26 cells upstairs and 24 cells downstairs in each of the four wings for a total of 200 cells per building."

Appendix E. Project Assessment Team Members

The Office of the Assistant Inspector General for Inspections, Office of the Special Inspector General for Iraq Reconstruction, prepared this report. The principal staff members who contributed to the report were:

Angelina Johnston

Kevin O'Connor

George Baffoe, P.E.